



Approval Sheet

客户名称 天音

(Customer Name)

产品名称 TY245 Antenna

(Specification)

客户料号

(Customer P/N)

产品料号

(O/I)

送样日期 2025-10-21

Frequency band	2. 4GBT		
Version	A		
RF	Chenmushao	Confirm	
Structural Engineer	Yangyuzhen		
Customer confirmation			
Date			



Catalogue

1. Project image

2. Test fixture

3. Matching circuit

4. S11 Test electrical performance

4.1 S11 Test Method Description Specification Standards

4.2 S11 Parameter

4.3 S11 Parameter image

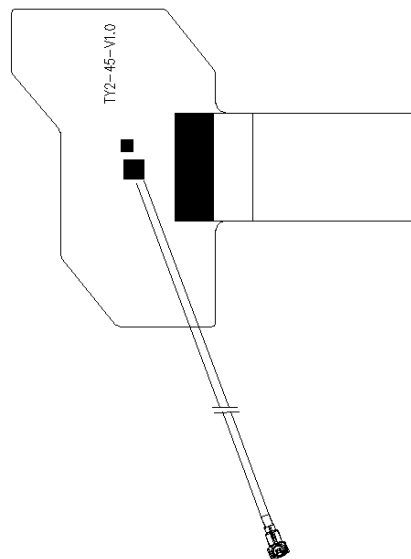
5. Power and sensitivity testing

5.1 Test data

6. Structural drawings



1. Project image (for reference only)

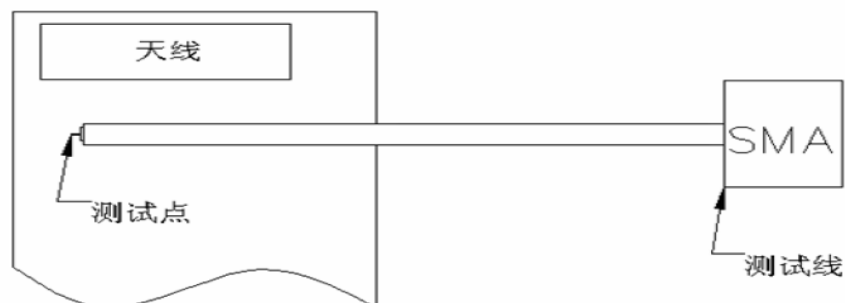


BT Antenna

2. Passive Test

Purpose: To test the passive parameters of the antenna as accurately as possible.

Method: This fixture uses a 50 ohm coaxial cable, with one end connected to the test point at the back end of the matching circuit (RF test hole front section) of the mobile phone motherboard, and the other end connected to the SMA connector. As shown in the following figure:

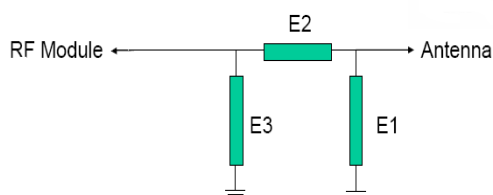




The following table shows the performance test indicators for TY245 mass-produced antennas:

TY245 - Antenna				
	Frequency (MHz)	VSWR	Frequency (MHz)	VSWR
Frequency band	Transmitting end		Receiving end	
2.4G BT	2400-2480	≤ 3.0	2400-2480	≤ 3.0

3. Matching circuit



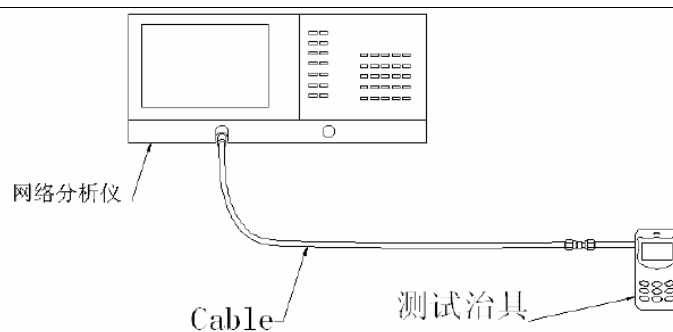
Element	Matching Value
E1	
E2	0
E3	

4. S11 Test

4.1 S11 Test Method Description Specification Standards

VSWR The testing devices are sequentially connected as follows :
E5071B Network analyzer → 50Ω Coaxial line → 120mm Copper tube → Test fixture.

Treatment of testing fixture: Use a hard cable to lead out the SMA-J connector from the 50 ohm test point of the antenna on the mobile phone PCB, connect it to a copper pipe with a choke ring, and then connect other devices in sequence.

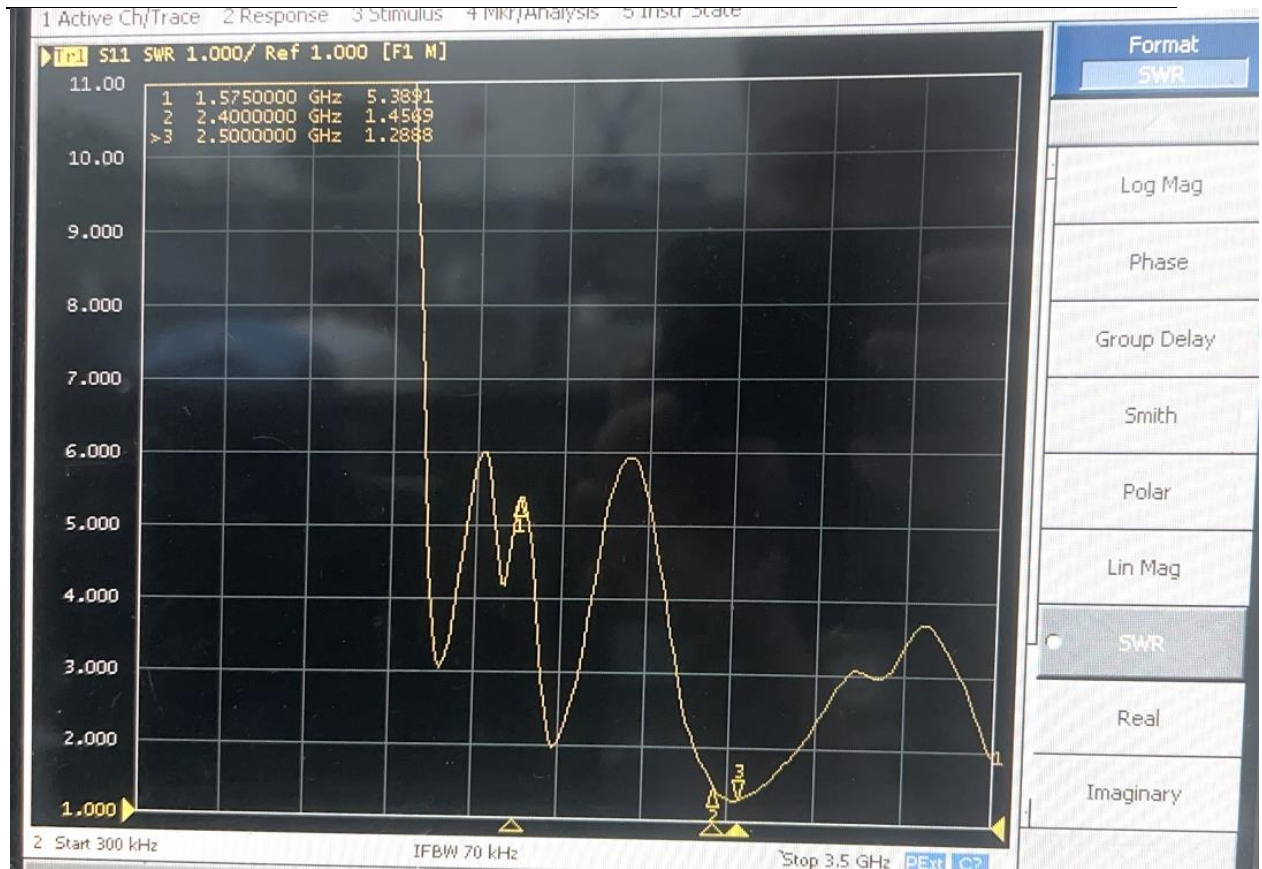


Test diagram

4.2 S11Parameter

The following table shows the standing wave ratio values at the edge frequency points of the ME61 antenna operating frequency band. The waveform diagrams of Return Loss and VSWR obtained from the test are shown in the attachment.

4.3 S11



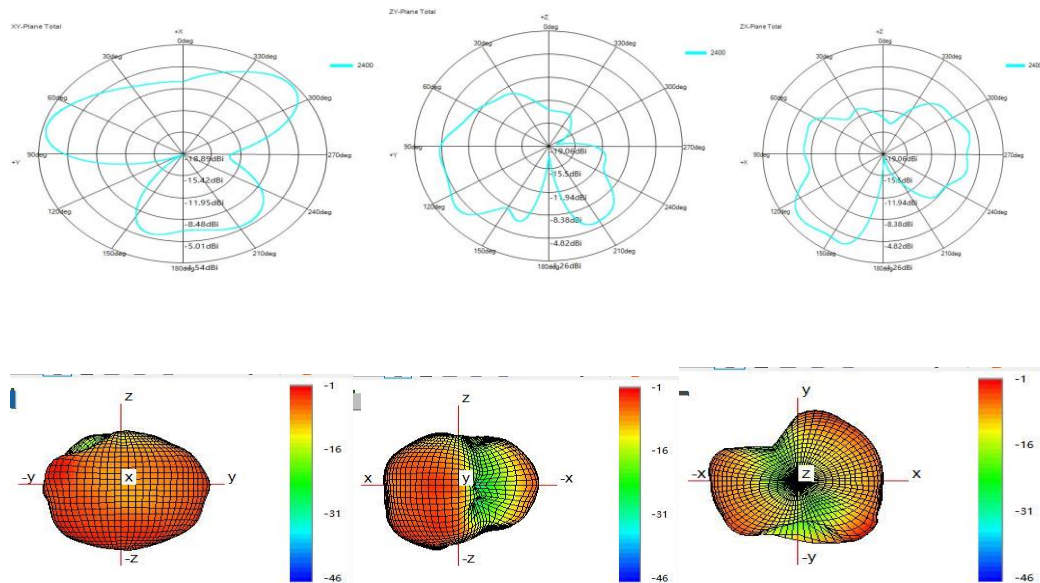
5. Power and sensitivity testing



5.1 Antenna gain

2.4G-BT		
Freq	Effi	Gain
(MHz)	(%)	(DBi)
2400	25.89	-1.05
2420	26.87	-0.76
2440	28.69	-0.45
2460	29.58	-0.35
2480	29.67	-0.2

5.2 -2D /3DPhi





6. Structural drawings

